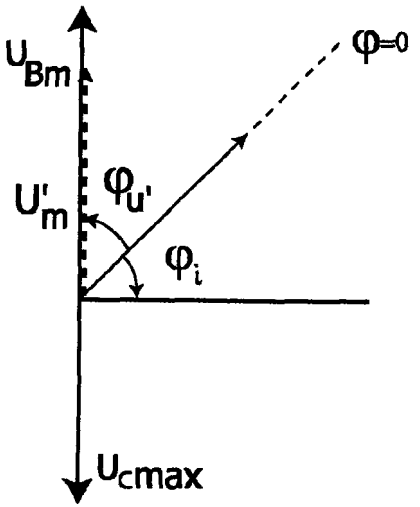

d- $u' = u_B + u_C$

$u' = U'_m \sin(\omega_1 t + \varphi_{u'})$

$U'_m = U_{Bm} - U_{cm}$

$= 162 - 127$

$U'_m = 35V$

$\varphi_{u'} = \frac{\pi}{2} - |\varphi_i| = \frac{\pi}{2} - \frac{\pi}{3} = \frac{\pi}{6} rad$

$\Rightarrow \boxed{u'(t) = 35\sin\left(100\pi t + \frac{\pi}{6}\right)}$

7) $P_m = UI\cos\Delta\varphi = \frac{U_m \times I_m}{2} \times \cos\frac{\pi}{3}$

$= \frac{40 \times 0,8}{2} \times 0,5 = 8$

$P_m = 8w$

8) a- I est maximale ⇨Z est minimale

$\Rightarrow L\omega_2 - \frac{1}{C\omega_2} = 0 \Rightarrow \omega_2 = \frac{1}{LC}$

$\Rightarrow N_2 = \frac{1}{2\pi\sqrt{LC}} = 44,52Hz$

Qarray.tn -Aqra Blech- Qarray.tn